

# Capsule

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## District Science Centre Tirunelveli

White shingle and blue seas are not far away from Tirunelveli. Situated in the far south of peninsular India which is bounded on three sides by the Arabian Sea, the Indian Ocean and the Bay of Bengal, the town's District Science Centre boasts of very attractive galleries built on the popular theme of the ocean. The gallery on 'Treasures From Ocean' which predominantly deals with marine biology and oceanography continues to be an enormous success ever since its inception in 1987, while "Oceanic Quest" which is complementary to the previous gallery is all set for formal inauguration.






Now let us have a look at the "Oceanic Quest". Dozens of hands-on, interactive exhibits are there to elucidate how mountains were raised, continents were separated and oceans were born due to massive movements of land masses; why sea water looks blue; how energy is harvested by utilizing ocean currents; why high tides are experienced; why sea water is salty and how water cycle perpetually continues. Exhibits also deal with density, pressure and temperature variation at different depths.



Furthermore, exhibits on Columbus' discovery of the western hemisphere and Magellan's epochal feat of sailing round the world take the visitors back to the far-off times when navigators first began to venture out into the high seas. Today, however, it is not only the sunlit surface of the oceans which is explored; the discovery of a variety of submersibles



have enabled man to delve into the silent murky depths of the ocean. In the gallery, exhibits on under-water exploration, mineral resources, marine biology and scuba diving are expected to capture the imagination of the young and the old alike.

Located centrally at the junction of Tirunelveli, Palayamkottai and Melapalayam, the science centre plays a

very important role in enhancing science consciousness among the townsfolk.



Besides, 'Cauvery' - the mobile science exhibition unit - is entrusted with the task of popularising science in the adjacent villages. Vibrant with activities throughout the year, the centre specialises in offering exhilarating experiences to the local children. They enjoy as much as they learn - especially while at play in one of the country's finest science parks.



# BITM Salutes Calcutta

When a city like Calcutta steps into its 300th year, it is indeed time for great rejoicing. However, it is also time for retrospection, for looking back into the glorious past which saw the emergence of the city as an unrivalled seat of culture and commerce in the East.

In appreciation of its greatness and many-splendoured charms, the Birla



Scroll painting showing balloon ascent by an Indian

Industrial and Technological Museum saluted the city anew on August 24, 1990. On that day was inaugurated a very informative exhibition on '300 Years of Science and Technology in Calcutta' and the tercentenary tribute was cheerfully shared by the people of the city.

The birth of Calcutta is officially dated from August 24, 1690, when Job Charnock first set foot on the banks of the Ganges, where later the city thrived. The gallery records events as early as Charnock's arrival and traces the history of the city's industrial development down to the present decade. The attractive theme of the exhibition is illustrated with a vast collection of photographs, some rare scientific artefacts, original machines, scale models, instruments, documents, old newspapers, books and journals, and charts and maps.



A part of the gallery.

The formation of various survey organisations like the Survey of India, Botanical Survey, Geological Survey, Zoological Survey and Anthropological Survey of India marked the beginning of systematic scientific studies and research activities in Calcutta. The exhibition gives a detailed account of the historical development of these organisations. Besides, it focuses on the establishment of the 200 year old Asiatic Society which heralded a new era of scientific research of western lines.

Proper consolidation of colonial power in India demanded development of railways, roads, irrigation and communication systems, as well as the growth of ancillary light industries. The exhibition vividly portrays the evolution

of roads, canals, bridges, railways, tramways and water transport in and around the city. It also traces the course of the history of shipbuilding and coach-building industries, photography, cinematography, textile mills, steel industries and printing technology.

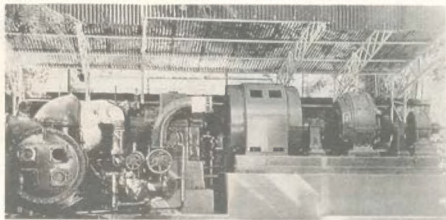
Spectacular artefacts like the two surviving steam rollers of late 19th century, archaic gas posts and decorated watertaps have added colour to the exhibition. Two period rooms, one



Advertisement of a Talking Machine Hall at Calcutta

showing a printing press of 1869, and the other, an early photographic studio have been set up as telling examples of old-day printing and photography.

Besides, an exhaustive collection of commemorative volumes, souvenirs, special magazines and journals, documents from National Archives as well as scientists' personal belongings are on display. The museum has released a brochure on the exhibition and a collector's portfolio with historical photographs on the occasion of the tercentenary celebrations of the city.



CESC's generator on display

## International Meetings

### Professional Enrichment Programme on Advanced Techniques in Museums for Middle Level Museum Professionals of ICOM Asia Pacific Zone

Venue : Central Research and Training Laboratory  
National Council of Science Museums  
Calcutta  
Duration : February 11 - March 9, 1991

### ICOM-UNESCO Workshop on Museum Basics for Museum Professionals

Venue : Goa/Trivandrum  
Duration : February 24 - March 3, 1991

### Meeting of Executive Council of ICOM

Venue : Delhi and Calcutta  
Duration : March 4 - 7, 1991

### Meeting of Governing Board of ICOM Asia Pacific Organisation

Venue : NCSM Headquarter  
Calcutta  
Duration : March 7 - 9, 1991

### UNESCO Workshop on Environment and Museum

Venue : Lyon  
France  
Duration : December 3 - 7, 1990

### International Seminar on Computational Methods in Automotive Engineering

Venue : Pune  
Duration : January, 1991

## Programmes

### Lecture on Ecology of Bharatpur Wetlands

Venue : National Museum of Natural History  
New Delhi  
Date : July 20, 1990

### Inauguration of Nehru Museum of Science and Technology

Venue : Indian Institute of Technology  
Kharagpur  
Date : August 3, 1990.

### National Convention on AC Drives and their Control

Venue : Vishakhapatnam  
Duration : November 24-26, 1990

### Seminar on Safety and Environmental Protection in Chemical and Allied Industries in India

Venue : Calcutta  
Date : November 2, 1990

### Seminar on Fabrication, Engineering and Construction of Chemical Plant Equipment in India

Venue : Madras  
Period : September, 1990

### All India Course in Vacuum Science and Technology

Venue : Indore  
Duration : October 16-26, 1990

## New Exhibit

Imagine an empty plastic bucket - of the sort you use in your bathroom - that sings whenever you place it over a pin. Remove the bucket and the music is gone. Funny, isn't it ?

This exactly is what happens in this exhibit where a metallic pin is made to vibrate in harmony with the music played by a hidden audio cassette player. Although you can feel the vibration of the pin with your fingertip you do not hear any music since the volume of air that vibrates with the pin is insufficient to raise the sound level to audibility. But when you place the empty bucket over the vibrating pin, a large volume of air, enclosed by the bucket, is forced into harmonious vibration with the pin, increasing the loudness thereby, and the music is heard. Here the plastic bucket in fact serves as the speaker cone for the hidden cassette player.



## National Science Seminar on 'Natural Disaster : Man-Master or Slave'

The National Council of Science Museums has fixed the topic of this year's National Science Seminar as 'Natural Disaster: Man-Master or Slave', as an expression of solidarity with the UN General Assembly's declaration of the 1990s as the International Decade for Natural Disaster Reduction. From time immemorial, natural calamity has caused terrible havoc in human societies, taking toll of lives and inflicting widespread damage upon property. Floods during

part of the government and the people can hold the wrath of nature under tight leash, thousands of young thinkers from all the states and union territories of India have involved themselves in the ongoing discussions on the grave issue. Successive stages of the block, district and state level seminars on the aforesaid topic will culminate in the final round of discussions at the National Science Seminar to be held in Delhi on October 10, 1990.

Reports on the block and district level science seminars have already started pouring in. On July 10, 1990, 67 students from 41 schools in the district of Gulbarga participated in the District Science Seminar jointly organised by the District Science Centre and Department of Education, Gulbarga. On August 3, 1990, Nehru Science Centre, Bombay and Department of Education, Greater Bombay organised a science



monsoons and draughts during dry spells, volcanic eruption and earthquakes, tropical cyclones and avalanches render man helpless even in the present era of science and technology. Unfortunately, the means for preventing natural disasters are not as developed as the means for providing relief to the affected areas.

The issue holds special significance for our country which is shrouded frequently with the threat of natural calamity. Inspired by the realization that only a conscious and united move on the



seminar in the auditorium of Nehru Science Centre, Bombay. 33 students from 33 schools took part in the seminar and two of them were selected to represent Greater Bombay Zone at the State Science Seminar which was held at the State Institute of Science Education, Ravinagar, Nagpur on August 11, 1990. Regional Science Centre, Guwahati; Department of Education, Government of Assam; Birla Industrial and



Technological Museum, Calcutta; and Assam Science Society jointly organised the State Science Seminar at the Regional Science Centre, Guwahati, on August 11, 1990. District Science Centre, Dharampur organised the valsalad District Science Seminar in its auditorium on July 23, 1990. On August 30, 1990, West Bengal Students' Science Seminar was held at Birla Industrial and Technological museum, Calcutta after the holding of seminars in 335 blocks, 100 municipalities and 17 districts. Moreover, state level seminars of the Eastern Zone are being held in the states of Arunachal Pradesh, Assam, Bihar, Manipur, Meghalaya, Tripura, Mizoram, Nagaland, Orissa, Sikkim and the Andaman and Nicobar Islands.

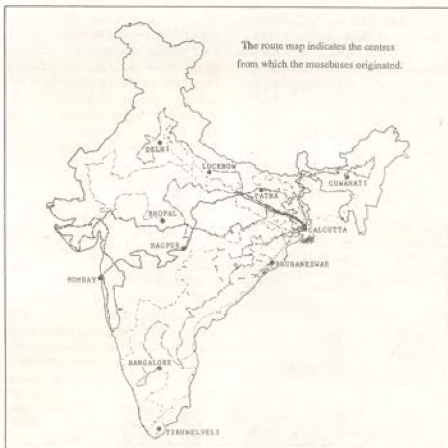


## Mobile Science Exhibition

## Silver Jubilee Preparations in Full Swing

Spadework for the Silver Jubilee celebrations of Mobile Science Exhibition is continuing unabated. Eleven of the science museums and centres functioning under the National Council of Science Museums are sending out 14 museobuses for taking part in the long drawn-out programme. Necessary preparations are complete, and some of the museobuses - equipped with exhibits, various accessories as well as with audio visual aids already rolled out from their parent museums.

Each of the museobuses is scheduled to trace a particular route, halting at various places for holding exhibitions and organising science popularisation activities jointly with the local people's science organisations. All these museobuses, after traversing their respective routes will meet for the final show at the Ramkrishna Mission School, Narendrapur, a few miles away from Calcutta. It was in the premises of this school that the first mobile science exhibition was commissioned 25 years back. A massive Gramin Mela (Village Fair) which will be organised simultaneously at the same site is expected to add to the festivity of the occasion.



## RSC, Lucknow Celebrates its First Anniversary Week

Regional Science Centre, Lucknow, livened up with a burst of festivity during September 7-13, 1990. The period was marked by the centre's first anniversary celebration programme which comprised an exhibition-cum-workshop on Bonsai and Cacti, popular lectures, general knowledge competition and a collage competition on 'Computer Revolution in India'. the Bonsai exhibition which was the first of its kind in Uttar Pradesh generated tremendous enthusiasm among the local populace.



On the concluding day, the prize distribution ceremony was held. Furthermore, plants and coloured fishes were distributed among the local school children with the purpose of inculcating in them a sense of love for nature and other living beings.

## The Glasgow Dome of Discovery

The Big Ears Stereo, the Hot Air Balloon, the Air Canon, the Glow Paper, the Orbit Well, the Shadow Wall and a dozen other attractive exhibits abound in the Glasgow Dome of Discovery which is unique in offering unforgettable experiences to its visitors.



The Glasgow Dome of Discovery

The building has an interesting history. It used to house a hydraulic mechanism to lower horses and carts to the entrance of a tunnel under the River Clyde. Later the science centre was set



The 'Demo Dome' for lectures and demonstrations

up with funds from British Petroleum (BP) and was thrown open to the public from April 6, 1990. BP had previously sponsored a visit by UK's famous travelling science centre, the Discovery Dome, which paved the way for the more permanent version at Glasgow.



'Big Ears' stereo exhibit

## BITM Felicitated

On the occasion of the Silver Jubilee celebration of the School of Fundamental Research held at Calcutta during August 6-8, 1990, the institution conferred Silver Jubilee Roll of Honour on Birla Industrial and Technological Museum, Calcutta in recognition of its pioneering efforts for popularising "fundamental

principles of scientific knowledge" and "portraying the application of it in human



School of Fundamental Research felicitating Birla Industrial and Technological Museum

welfare through various audio-visual, innovative techniques".

The Museum's Director Mr Samar Bagchi was also felicitated as the Silver Jubilee Life Fellow.

## ITRC Presents Water Analysis Kit to RSC, Lucknow

Regional Science Centre, Lucknow and Industrial Toxicological Research Centre (ITRC) jointly organised an exhibition on "Water Mission", which was inaugurated at the science centre on August 3, 1990 by Dr. A. P. Mitra, Director General, Council of Scientific and Industrial Research (CSIR). Dr Saroj

Ghose, Director General, National Council of Science Museums, was also present on the occasion.

Dr Mitra presented a 'Water Analysis Kit' developed at ITRC to the science



Director General, CSIR presenting Water Analysis Kit to Director General, NCSM



Exhibition on 'Water Mission'

centre as well as to the representatives from the states of West Bengal, Gujarat, Assam, Tamil Nadu, Punjab, Uttar Pradesh and Kerala. The kit is meant for testing water samples and detecting salt and bacteria content in water.

## Science Centre News

Year round educational activities characterize the science centres and museums of the country. They come up with innovative, thought-provoking programmes tailored to enhance science consciousness among the people. Here is a brief report on the multifarious activities they organised during the last three months.

### DSC, Dharampur

During June 21 - 24, 1990, District Science Centre, Dharampur organised a Tribal Youth Festival at Saputara, situated in the remote district of South Gujarat. The programme was marked by creative ability activities, demonstrations on model making with plaster of Paris, science film shows, snake demonstration programme, science demonstration



lectures and essay competition on "Save Cultural Heritage of the Tribals". Popular science lectures were held on "Environment Conservation", "Youth Leadership and the Role of Youth against Superstitions" and "Employment Opportunities for the Tribal Youth".

### DSC, Tirunelveli

The District Science Centre, Tirunelveli in collaboration with Rotary Club, organised a Community Medical Programme on July 3, 1990. Various aspects of Asthma were explained to the local people who attended the programme.

As part of the Silver Jubilee



celebrations of NCSM's Mobile Science Exhibition, the Centre launched an inaugural programme on July 19, 1990, before sending out its mobile science exhibition unit 'Cauvery' for joining the other units at Narendrapur. The muscibus will cover 20 exhibition sites in Tamil Nadu, 17 in Andhra Pradesh; 6 in Orissa, and 3 in West Bengal before reaching its final destination at Narendrapur near Calcutta.

The function was held in the premises of the Vivekananda Kendra Vidyalaya at Kanyakumari and was attended by some 4000 people.

### BITM, Calcutta

In the "Summer Vacation Hobby Camp-'90" - a popular programme which Birla Industrial and Technological Museum organises every year - 108 students completed 32 projects in the disciplines of Biology, Chemistry, Physics, aeromodelling and ship building.



Some of the topics on which experiments were carried out were osmosis, geotropism and phototropism, emulsification, acid-base titration, chemical equilibrium, role of catalyst in chemical reaction and Azo Dye

preparation; density meter; convection of air current; total internal reflection and dip angle.

Projects on aeromodelling and ship-building included chuck glider, catapult glider, towline glider, free flight-powered model, dug out canoe, raft, catamaran, sailing ship, motor boat and cruiser-310.

### NSC, Bombay

Teachers' Training Programme (TTP) is held every year at the Nehru Science Centre, Bombay, wherein teachers are trained in the use of different tools, audio-visual equipments, and in fabrication of simple teaching aids for classroom use. The materials are provided by the centre. A Teachers'



Training Programme was held this year also from July 2 - 12. Eight teachers participated and eighteen teaching aids were fabricated during the training programme.

### We Need ...

CAPSULE is looking forward to your sending by October 31, 1990 publication materials for the 20th issue. Please send short notes, photographs, problems, suggestions, cartoons and puzzles.



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